

Amendments to the Specification

Please replace paragraph 2 beginning on page 1 with the following amended paragraph:

- - A common practice in the concrete industry is to mix inexpensive materials such as ~~films~~ fillers into concrete mixtures to lower the overall cost of the mixture. One such cost reducing material is a pozzolan such as fly ash, silica, clay or slag. Fly ash is also reported to strengthen some concrete mixes (Dodson and Roberts, 1980). According to Boral Material Technologies, February 5, 2004, "Certain fly ashes retard concrete initial set times and this may prove to be advantageous during the hot weather." A problem with using fly ash, however, is that there is no known accelerator that may be used with the fly ash mixture to decrease the time required for the mixture to set in cold weather, *e.g.* temperatures less than 60° F. A non-chloride type accelerator in a fly ash mixture may even retard the setting time of concrete. - -

Please replace paragraph 5 beginning on page 2 with the following amended paragraph:

- - The present disclosure generally relates to ~~Methods and~~ compositions for a concrete admixture that allows use of fly ash as a filler in low temperatures and methods of using the same. Specifically, the present disclosure relates to
a A novel concrete admixture including a non-chloride accelerator, and a nitrite based corrosion inhibitor, that accelerates the time required to set concrete in low temperature settings even when fly ash is a component. A suitable admixture includes a mixture of a non-chloride type accelerator and a calcium nitrite-based corrosion inhibitor. Sodium, potassium, magnesium and

aluminum are alternatives to calcium. Other ingredients include hydraulic cement, *e.g.* Portland cement, aggregates, fillers and optional additives. - -

Please replace paragraph 7 beginning on page 2 with the following amended paragraph:

- - Slump, which characterizes fluidity, shows that concrete ~~mixes~~ mixed with the disclosed admixture sets faster than a concrete mix without the admixture. - -

Please replace paragraph 10 beginning on page 4 with the following amended paragraph:

- - The present disclosure is for a A novel concrete admixture including ~~includes~~ a mixture of a non-chloride type accelerator and a nitrite-based corrosion inhibitor that work in combination to accelerate the setting time of a concrete mixture at low ambient temperatures *e.g.* less than 60° F down to about 0° F. A suitable admixture contains about 30% accelerator and 70% corrosion inhibitor ~~up to about 0° F~~. Acceleration occurs even with a 50% - 50% admixture, but cost is higher because of the higher cost of the accelerator. Fly ash is a pozzolan used in cement mixtures. Use of the admixture reduces the time required for a cement and fly ash mixture to set by about 50-70%. Although non-chloride type accelerators such as POZZUTEC® 20 are known in the art of concrete making, they are not able to be used with fly ash because the acceleration time is unacceptably slow. According to the manufacturer, POZZUTEC® 20 is "a multi-component, non-chloride, water-reducing and accelerating admixture formulated to accelerate

concrete setting time... across a wide range of ambient temperatures". - -

Please replace paragraph 11 beginning on page 4 with the following amended paragraph:

- - Low temperature setting of a concrete mixture including mixtures containing fly ash, may be accelerated by adding an accelerator to the mixture wherein the accelerator is a mixture of a non-chloride type accelerator and a nitrite-based corrosion inhibitor. A suitable accelerator is a ~~the~~ non-chloride accelerator known as POZZUTEC® 20 which is available from Master Builders, Inc. of Cleveland, Ohio, and a corrosion inhibitor such as RHEOCRETE® CNI which is also available from Master Builders, Inc. of Cleveland, Ohio, (as of June 8, 2004 Degussa Admixture, Inc.) or DCI®S from Grace Construction Products. RHEOCRETE® CNI is a corrosion inhibitor that protects against salt damage. Although the ingredients disclosed can be blended together or put in the concrete separately, manufacturers of the individual components recommend they not come into contact with other admixtures prior to entering the concrete. - -

Please replace paragraph 22 beginning on page 6 with the following amended paragraph:

- - No water reducing agent was used. Concrete was poured into the boxes. To determine whether a mix was set, the surface (top) of the poured concrete in each box was touched at about the same times periodically over a period of several hours to determine the first concrete to set. ~~That was~~ The concrete mixture in Box 3, ~~contains~~ containing the admixture of 30% POZZ and 70%

CNI, was the first of the four concrete mixtures to set. (Table 1). Other suitable ways to test whether concrete is set include throwing a rock at the surface, and inferring that the concrete is set if the rock rolls, ~~that the concrete is set.~~ A tamping rod can be used[[]] or needles can be inserted to test the concrete set. - -

Please replace paragraph 23 beginning on page 7 with the following amended paragraph:

- - The test was repeated twice and the results of both of these repeated trials led to the same conclusion-that the 30%-70% composition of POZZUTEC®20 to RHEOCRETE® CNI or DCI® S had the shortest setting time. - -